ABSTRACT

Systems and methods are provided for managing communications between two or more ad-hoc networks in a communication system. The systems and methods may have flexible communication time sharing of one or more nodes taking part in two or more ad-hoc networks. For example, the communication scheduling function for a node shared by two or more ad-hoc networks is provided with a generic functional architecture such that it may be located in a number of different locations. In one embodiment, a Bluetooth communication system includes an inter-piconet scheduling function having a JUMP mode introduced to distinctly identify a node to its neighbors as being shared with multiple ad-hoc networks. The jump mode may have one or more methods for managing the inter-network communications that may include: (1) predetermined fixed starting point and length communication windows, (2) time points with flexible starting points and communication window length, and/or (3) random starting time and length communication windows.